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**From:** Laurene Allen [Personal Email / Ex. 6]  
**Sent:** 9/29/2018 3:20:09 AM  
**To:** Clark Freise [clark.freise@des.nh.gov]  
**CC:** geoffdaly@mkd-usa.com; don@provencher.com; Dunn, Alexandra [dunn.alexandra@epa.gov]; [Personal Email / Ex. 6]  
**Subject:** Air emission tests

Clark

I was reviewing the emails Geoff Daly initiated with you about the air stack testing completed in May of this year not being released yet and have some questions. I am not an engineer so perhaps I am missing something here, but I do review and read all one stop documents as do several others who advocate for the persistent and long term contamination of our communities.

You stated to Geoff that air test data was last done in 2016 and it did not exceed the approved permits. Were you referencing Permitting for PFAS emissions ( are they assigned EPA health advisories as are water and contact soil as they are not a regulated chemical class ?) or for the other manufacturing chemicals that are regulated by the EPA? There seems to be a bit of a communication issue or I am misunderstanding, as I was certain I had seen tower tests from 2017 which I looked through my own files for and found the following:

STATION ID:	MS_TOWER
STATION:	MS TOWER RESIDUE MERRIMACK
DISPLAYING:	23 records

Filter By Parameter: None

Filter By Date: Starting: Ending:

Apply Filter

DATE	ACTIVITY ID	PARAMETER	RESULTS	METHOD	STATUS	RESULTS VALID
5/29/2017 01:40 PM	1700885-02	2-(N-ETHYLPERFLUORO-A-OCTANESULFONAMIDO)-ETHANOL - N-ETFOSE	< 798 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	3-(N-METHYLPERFLUORO-A-OCTANESULFONAMIDO)-ETHANOL - N-MEFOSE	< 798 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	8:2 FLUOROTELOMERSULFONATE - 8:2 FTS	409 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	ETHYLPERFLUORO-1-OCTANESULFONAMIDE - N-ETFOSA	< 200 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	FLUOROTELOMER SULFONATE 6:2	924 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	METHYLPERFLUORO-1-OCTANESULFONAMIDE - N-MEFOSA	< 200 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUORO-N-TRIDECANOIC ACID - PFTRDA	5800 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROBUTANESULFONIC ACID	< 39.9 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROBUTANOIC ACID - PFBA	1880 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUORODECANE SULFONATE - PFDS	< 39.9 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUORODECANOIC ACID - PFDA	9700 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUORODODECANOIC ACID - PFDGA	8140 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROHEPTANE SULFONATE - PFHPS	< 39.9 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROHEPTANOIC ACID - PFHPA	9170 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROHEXANOIC ACID - PFHXA	17500 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROHEXYLSULFONIC ACID	< 39.9 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUORONONANOIC ACID - PFNA	6120 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROOCTANESULFONAMIDE - FOSA	< 39.9 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROOCTANOIC ACID - PFOA	52000 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROOCTYLSULFONIC ACID	275 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROPENTANOIC ACID - PFPEA	7540 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROTETRADECANOIC ACID - PFTEDA	6940 NG/G DRY	537 MOD	FINAL	UNKNOWN
5/29/2017 01:40 PM	1700885-02	PERFLUOROUNDECANOIC ACID - PFUNA	3610 NG/G DRY	537 MOD	FINAL	UNKNOWN

STATION ID:	MA_TOWER
STATION:	MA TOWER RESIDUE MERRIMACK
DISPLAYING:	23 records

Filter By Parameter:  

Filter By Date: Starting:  Ending:

DATE	ACTIVITY ID	PARAMETER	RESULTS	METHOD	STATUS	RESULTS VALID
6/29/2017 01:30 PM	1700885-01	2-(N-ETHYLPERFLUORO-A-OCTANESULFONAMIDO)-ETHANOL - N-ETFOSE	< 199 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	2-(N-METHYLPERFLUORO-A-OCTANESULFONAMIDO)-ETHANOL - N-MEFOSE	< 199 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	8:2 FLUOROTELOMERSULFONATE - 8:2 FTS	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	ETHYLPERFLUORO-1-OCTANESULFONAMIDE - N-ETFOSA	< 199 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	FLUOROTELOMER SULFONATE 8:2	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	METHYLPERFLUORO-1-OCTANESULFONAMIDE - N-MEFOSA	< 199 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUORO-N-TRIDECANOIC ACID - PFTRDA	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROBUTANESULFONIC ACID	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROBUTANOIC ACID - PFBA	196 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUORODECANE SULFONATE - PFDS	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUORODECANOIC ACID - PFDA	43.1 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUORODODECANOIC ACID - PFDDA	51 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROHEPTANE SULFONATE - PFHP'S	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROHEPTANOIC ACID - PFHPA	52 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROHEXANOIC ACID - PFHXA	254 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROHEXYLSULFONIC ACID	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUORONONANOIC ACID - PFNA	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROOCTANESULFONAMIDE - FOSA	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROOCTANOIC ACID - PFOA	640 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROOCTYLSULFONIC ACID	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROPENTANOIC ACID - PFPEA	107 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROTETRADECANOIC ACID - PFTEDA	< 39.7 NG/G DRY	537 MOD	FINAL	UNKNOWN
6/29/2017 01:30 PM	1700885-01	PERFLUOROUNDECANOIC ACID - PFUNA	45.9 NG/G DRY	537 MOD	FINAL	UNKNOWN

Could you please clarify this issue for me?

Also what is the difference between an MS tower and an MA tower that would explain the higher test results in the MS tower residue?

And finally, one of the points of the PFAS Investigation that has always bothered me is from the start is that particles via air emissions was initially communicated as the source of our contamination yet the company was allowed to continue to do business as usual, emitting from 13 unfiltered air stacks. As I know DES is aware, the discontinuation of PFOA/PFOS and the use of replacement chemicals from approximately 2015 on does not make this chemical class safer, it's simply not acknowledged. While I do understand that your job is regulation, our health impacts are the elephant in the room and I do believe that many fine scientists I have spoken to in your agency are aware that our exposure must be considered as a complete cocktail of PFAS.

The air emissions bill does not give the health protections we need and I have grave concerns for children as well as

vulnerable populations that have had and continue to have PFAS exposure via ingestion, inhalation, local produce, fish and biosolid and many other pathways. Sadly, we are far behind and need precautionary measures in place now as the qualities of Gen X that we have been exposed to via a steady stream of air emissions since 2015 are the most troubling threat we face and if a pass through gathering of health data were to be done it I believe it would be very damaging to the makers and users of this chemical class.

In the words of Dr Linda Birnbaum at the Senate hearing this week “we are not going to be able to test our way out of this”

Regards and Thank you for the difficult job you have,  
Laurene